

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (currently amended) Method of selecting at least one transmission channel from a plurality of transmission channels, in a time division multiple access protocol, comprising the steps of:

receiving for each channel a periodic indication of the transmission quality of that channel;

storing these indications for each channel during a time window;

selecting at least one channel from among the plurality of transmission channels that has a best rank, the rank being a number of stored indications for the respective channel during the time window that are better than a the best current transmission quality indication position, the position being relative to the transmission quality indications stored for that channel during the time window.

2. (canceled)

3. (previously presented) Method according to Claim 1, characterized in that it consists, during a step (S0), in determining the number of channels N, the size of the

time window T and the initial values of the transmission qualities of each channel during the time window and in that these parameters may be updated by interrupting the method at moments chosen by a reinitialization finite state machine, particularly when the number of channels N changes due to the activity of the users.

4. (currently amended) Method according to Claim 3, characterized in that it consists in executing, during each unit of time, the said series of instructions consisting in:

executing a loop (B1) to determine for each channel (2_i) the rank position (P_i) of the current transmission quality indication relative to those stored for that channel during the time window;

selecting, during a step (S5), from the channels for which data are to be transmitted at least one channel (2_j) that has the best rank or amongst the best value(s) (P_j);

during a step (S6), giving transmission authorization at least to the channel (2_j).

5. (currently amended) Method according to Claim 4, characterized in that the loop (B1) consists, for each channel (2_i, where i is from 1 to N), in:

acquiring, during a step (S1), a transmission quality indication of the channel (2_i), that is $C_i(t)$;

initializing, during a step (S2), the rank a value of position Pi at 1;

executing a second loop (B2) in order to determine the rank a value indicative of the position (Pi);

executing a third loop (B3) in order to update the transmission quality indications of the channel (2_i) during the time window.

6. (currently amended) Method according to Claim 5, characterized in that the loop (B2) consists, for each loop index (k, where k is from 1 to T), in:

evaluating the result of a test (T1) defined by the relation: $C_i(t-k) > C_i(t)$;

incrementing the rank indication of position (Pi) by one unit during a step (S3) if the result of the test (T1) is positive;

otherwise, evaluating the result of a test (T2) defined by the relation ($C_i(t-k) == C_i(t)$) AND ($RAND < 1$) where RAND is a function returning a random variable, in particular uniformly distributed over the interval [0,2];

executing the step (S3) of incrementing the rank indication of position (Pi) if the result of the test (T2) is positive.

7. (original) Method according to Claim 5, characterized in that the loop (B3) consists, for each loop index (k, where k is from T to 1), in:

assigning the previously stored value $C_i(t-k+1)$ to the variable $C_i(t-k)$ during a step (S4).

8. (currently amended) Method according to Claim 7, characterized in that a ~~convention such as a random choice is applied to the step (S4) when several active channels have the same best rank a minimum indication of position (P_i)~~.

9. (currently amended) Method according to Claim 7, characterized in that if several channels are authorized to transmit simultaneously, the step (S4) consists in selecting from the channels for which data are to be transmitted those that have the best rank position (P_i) and in that a step (S5) consists in giving transmission authorization to those channels.

10. (currently amended) Method according to Claim 6, characterized in that the second test (T2) executes a predetermined convention to compute the rank indication of position (P_i) when the current transmission quality indication of the channel, that is $C_i(t)$, is equal to one or more values of the time window.

11. (previously presented) Method according to Claim 5, characterized in that the loops (B1, B2, B3) are, partially or wholly, processed in parallel and not sequentially.

12. (currently amended) Communication system using the method of claim 1, characterized in that it comprises:

a method for receiving, for at least one channel, a periodic indication of transmission quality of that channel;

a memory for storing the transmission quality indications of each channel during a time window;

a computing circuit to determine, for each channel for which a periodic indication of transmission quality has been received, the rank position of the current transmission quality indication of that channel relative to those stored for that channel during the time window;

a circuit for selecting ~~at least one~~ the transmission channel that has the best rank current transmission quality indication position relative to those stored for that channel during the time window.

13. (currently amended) Communication system according to Claim 12, characterized in that the circuit for selecting at least one transmission channel comprises a means of selecting channels over which data are to be transmitted and that have the best rank or one amongst the best current transmission quality indication position(s) relative to the positions stored for that channel or those channels during the time window.

14. (previously presented) Communication system according to Claim 12, characterized in that it comprises at least one circuit (A1) for acquiring the transmission quality signal of the channel (2_i), that is $C_i(t)$ on the date t.

15. (previously presented) Communication system according to Claim 12, characterized in that it comprises at least one memory (A2) consisting of T blocks, each block (A2.k) containing the value of transmission quality of the channel (2_i) on the date (t-k), that is $C_i(t-k)$, where k is from 1 to T.

16. (previously presented) Communication system according to Claim 12, characterized in that it comprises at least one set (A3) of at most T comparison circuits, each circuit (A3.k) comparing the current transmission quality indication contained in at least the circuit (A1) with the transmission quality indication on the date t-k contained in the memory block (A2.k), where k is from 1 to T.

17. (previously presented) Communication system according to Claim 12, characterized in that it comprises at least one adder (A4), to the input of which is connected the output of each comparison circuit (A3.k), where k is from 1 to T, and an independent input always giving the value 1.

18. (currently amended) A method of selecting at least one transmission channel from a plurality of transmission channels, in a time division multiple access protocol, comprising the steps of:

receiving for each channel periodic indications of the transmission quality of that channel;

storing the indications for each channel during a time window;

determining for each channel a counter indicating a number of times a stored indication is better than
~~during the time window and for each channel, numerically ordering a current transmission quality indication relative to the stored indications to provide a numerically ordered position of the current indication relative to the stored indications; and~~

selecting from among the plural channels [[the]] at least one channel that has the highest counter
~~numerically ordered position.~~